

A leaf blight disease was found on peony plants growing in the first author's apartment garden in May, 2003. A species of *Phytophthora* was isolated from the lesions. The isolate readily produced sporangia and sex organs on V8 juice agar plates. Sporangia were papillate, ovoid to subspherical and caduceus with a pedicel. Sporangia were 33.6-38.4 x 33.6 $\mu$ m with l/b ratio approximately 1.14, papillae 4-5 $\mu$ m high, pedicels also 4-5 $\mu$ m long. Oogonia were spherical, 28.8 $\mu$ m in diameter. Antheridia were globose, 14.4 $\mu$ m in diameter and mating with oogonia paragynously. Mycelia grew best at 30 $^{\circ}$ C and did not grow at 35  $^{\circ}$ C or above, and at 5 $^{\circ}$ C. The morphological characteristics conformed to *P. cactorum*.

**4-08. Leaf Blight of *Fatsia japonica* caused by *Phytophthora cactorum* (oral)**

B.S. Kim<sup>1</sup>, Y.S. Lim<sup>2</sup> and J.H. Kim<sup>1</sup>, <sup>1</sup>Dept. of Hort., Kyungpook National Univ. Daegu 702-701; <sup>2</sup>Cheongdo Peach Exp. Sta., Cheongdo-gun, Gyeongbuk 714-851

A leaf blight disease was found on *Fatsia japonica* plants growing in the first author's apartment garden in May, 2003. Major symptoms were leaf blight and petiole rot. A species of *Phytophthora* was isolated from the lesions. The isolate readily produced sporangia and sex organs on V8 juice agar plates. Sporangia were papillate, ovoid to subspherical and caducous with a pedicel. Sporangia were 33.6-38.4 x 33.6 $\mu$ m with l/b ratio approximately 1.14, papillae 4-5 $\mu$ m high, pedicels also 4-5 $\mu$ m long. Oogonia were spherical, 28.8 $\mu$ m in diameter. Antheridia were globose, 14.4 $\mu$ m in diameter and mating with oogonia paragynously. Mycelia grew best at 30 $^{\circ}$ C and did not grow at 35  $^{\circ}$ C or above, and at 5 $^{\circ}$ C. The morphological characteristics conformed to *P. cactorum* (Leb. And Cohn) Schroeter.

**4-09. Shoot Blight of Suckers of Common Lilac caused by *Phytophthora citricola* Sawada (oral)**

B.S. Kim<sup>1</sup>, Y.S. Lim<sup>2</sup> and J.H. Kim<sup>1</sup>, <sup>1</sup>Dept. of Hort., Kyungpook National Univ. Daegu 702-701; <sup>2</sup>Cheongdo Peach Exp. Sta., Cheongdo-gun, Gyeongbuk 714-851.

Shoot blight was occurring on shoots of suckers of common lilac (*Syringa vulgaris* L.) growing in first author's apartment garden in May 2003. A species of *Phytophthora* was isolated from the lesions. The isolate did not sporulate on agar media but formed sporangia in water and also formed sex organs in single culture. Sporangia were semipapillate, ovoid obpyriform, measured 45.6-52.8 x 33.6-36.0 $\mu$ m. Sporangia were very variable in shape. Optimum temperature for mycelial growth was 25 $^{\circ}$ C. Oogonia were spherical and antheridia were paragynous. Optimum temp for mycelial growth was 25 $^{\circ}$ C. The isolate was identified as *Phytophthora citricola* on the basis of the morphological characteristics and cardinal temperature.

**4-10. Leaf blight of Castor Bean Plants caused by 2 Species of *Phytophthora*(oral)**

B.S. Kim<sup>1</sup>, Y.S. Lim<sup>2</sup> and J.H. Kim<sup>1</sup>, <sup>1</sup>Dept. of Hort., Kyungpook National Univ. Daegu 702-701; <sup>2</sup>Cheongdo Peach Exp. Sta., Cheongdo-gun, Gyeongbuk 714-851.

A leaf blight disease caused by a species of *Phytophthora* has been observed on castor bean plants growing near dwelling houses in Manchon-dong, Daegu since 1993. The first isolate that we have kept was producing papillate, ovoid-obpyriform to obpyriform sporangia with on a simple sympodial sporangiophore from diseased tissue placed on water agar plates. The pure isolate, however, did not sporulate on agar media, and rarely even in water, but produced mycelial swellings and chlamydospores in water. Sporangia measured 26.1-77.4 x 23.2-44.0 $\mu$ m. Chlamydospores were either terminal or intercalary, and measured 24-29.4 $\mu$ m in diameter. Sex organs were not formed in a single culture. In 2003, another pure isolate was isolated from castor bean plants with similar symptoms at the same place. The second isolate was distinct from the first one in that the second isolate was readily and abundantly sporulating on V8 juice agar plates. Sporangia of the second isolate were papillate, ovoid and caducous with a pedicel. Sporangia measured 19.5-48.8 x 17.6-34.3 $\mu$ m with 3.7 $\mu$ m high papilla and 4.1 $\mu$ m long pedicel. No sex organs were formed in a single isolate culture. Both isolates were pathogenic on castor bean plants. Results of the efforts to identify the two species of *Phytophthora* will be discussed.

#### 4-11. Stem Rot of Strawberry Caused by *Sclerotium rolfsii* in Korea

Jin-Hyeuk Kwon\*, Sun-Ki Jeong, Kyeng-Ae Son, Tae-Seung Kim, Chun-Hee Lee, Geun-Woo Song and Chang-Seuk Park<sup>1</sup>

Gyeongsangnam-do Agricultural Research and Extension Services, Jinju 660-360, Korea

<sup>1</sup>College of Agriculture, Gyeongsang National University, Jinju 660-701, Korea

A destructive stem rot of strawberry (cv. Akihime) occurred sporadically in farmers' fields around Daegok-Myeon, Jinju City, Gyeongnam province in Korea. The infected plants showed stem and crown rot, sometimes whole plant blighted. White mycelia spread over stems of infected clones and sclerotia formed on the old lesions near to soil surface. The fungus formed white colony on PDA and showed maximum mycelial growth and sclerotial formation around 30°C. The fungus usually have many narrow mycelial strands in the aerial mycelium and the width were 4.0~10.0  $\mu$ m. The typical clamp connections were formed on the mycelium. The shape of sclerotia was globoid and 1.0~2.8 mm in size. The fungus was isolated repeatedly from the infected tissues and identified as *Sclerotium rolfsii*. The fungus was inoculated to strawberry and confirmed its pathogenicity. This is the first report on the stem rot of strawberry caused by *Sclerotium rolfsii* in Korea.

#### 4-12. Diagnosis of *Phytophthora* sp. and Its Concentration by Potato Slices in Series Culture Soils.

Jung Sup Lee<sup>1</sup>, Jong Hwan Park<sup>1</sup>, Kyeong Suk Han<sup>1</sup>, Young Mun Choi<sup>2</sup>. <sup>1</sup>National Horticultural Research Institute, Suwon 440-706, Korea, <sup>2</sup>Taegue Apple Research Institute, Taegue 716-811, Korea